

SUBSTITUTE FORM PTO-1449 (MODIFIED)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. 07043/015007	SERIAL NO. Unassigned 08/900735
70608 U.S. PTO  INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use several sheets if necessary)		APPLICANT: M. Allen Northrup		
07/24/97 (37 CFR 1.98(b))		FILING DATE: Herewith	GROUP 1634	

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER							ISSUE DATE	PATENTEE		CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
<i>BYF</i>	AA	2	1	2	7	1	9	3	8/16/38	Toulmin, Jr.		134	60	
	AB	3	0	2	9	7	4	3	4/17/60	Johns		103	150	
	AC	4	2	1	9	3	3	5	8/26/80	Ebersole		23	230 B	
	AD	4	5	5	6	4	6	7	12/3/85	Kuhn, et al.		204	193	
	AE	4	5	9	6	6	9	7	6/24/86	Ballato		422	98	
	AF	4	5	9	8	0	4	9	7/1/86	Zelinka, et al.		435	287	
	AG	4	6	0	2	1	8	4	7/22/86	Meitzler		310	322	
	AH	4	6	3	2	8	0	8	12/30/86	Yamamoto, et al.		422	72	
	AI	4	6	7	3	6	5	7	6/16/87	Christian		436	501	
	AJ	4	6	7	6	2	7	4	6/30/87	Brown		137	806	
	AK	4	6	8	3	1	9	5	7/28/87	Mullis, et al.		435	6	
	AL	4	6	9	2	6	5	4	9/8/87	Umemura, et al.		310	334	
	AM	4	7	0	8	9	3	1	11/24/87	Christian		435	7	
	AN	4	7	3	7	4	6	4	4/12/88	McConnell, et al.		436	43	
	AO	4	7	5	9	8	2	8	7/26/88	Young, et al.		204	1 T	
	AP	4	9	0	8	1	1	2	3/13/90	Pace		204	299 R	
	AQ	4	9	2	0	0	5	6	4/24/90	Dasgupta		436	50	
	AR	4	9	5	2	2	6	6	8/28/90	Tsuruta, et al.		156	243	
	AS	4	9	6	0	4	8	6	10/02/90	Perkins, et al.		156	633	
	AT	4	9	6	3	4	9	8	10/16/90	Hillman, et al.		436	69	
	AU	5	0	0	0	8	1	7	3/19/91	Aine		156	633	
	AV	5	0	0	3	8	2	2	4/2/91	Joshi		73	204.23	
	AW	5	1	5	3	4	7	6	10/6/92	Kosinski		310	313R	
	AX	5	2	1	2	9	8	8	5/25/93	White, et al.		73	599	
	AY	5	2	2	0	1	8	9	6/15/93	Higashi, et al.		257	467	
	AZ	5	2	2	9	2	9	7	7/20/93	Schnipelsky, et al.		436	94	
<i>BYF</i>	BA	5	2	5	2	2	9	4	10/12/93	Kroy, et al.		422	102	

EXAMINER B.L. Jason

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U.S. PATENT DOCUMENTS

EXAMINER INITIAL		PATENT NUMBER							ISSUE DATE	PATENTEE		CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
<i>BYJ</i>	BB	5	2	7	0	1	8	3	12/14/93	Corbett, et al.		435	91.2		
	BC	5	2	9	6	3	7	5	3/22/94	Kricka, et al.		435	291		
	BD	5	3	0	4	4	8	7	4/19/94	Wilding, et al.		435	291		
	BE	5	3	8	4	0	2	9	1/24/95	Campbell		204	415		
	BF	5	3	8	5	7	0	9	1/31/95	Wise, et al.		422	98		
	BG	5	4	2	7	9	4	6	6/27/95	Kricka et al.		435	291		
	BH	5	4	8	6	3	3	5	1/23/96	Wilding, et al.		422	55		
<i>BYJ</i>	BI	5	4	9	8	3	9	2	3/12/96	Wilding, et al.		422	68.1		
		DOCUMENT NUMBER			PUBLICATION DATE		COUNTRY OR PATENT OFFICE			CLASS	SUBCLASS	TRANSLATION			
	BJ	0 347 579 A2			5/16/89		EPO			B01L	3/00				
	BK	0 381 501 B1			8/6/94		EPO			C12Q	1/68				
	BL	0 385 964			1/9/90		EPO			C12M	1/40				
	BM	0 402 995 A2			12/19/90		EPO			B01L	7/00				
	BN	0 483 117 A2			4/29/92		EPO			G01N	33/48				
	BO	2650657			2/8/91		France			F27B	17/02				
	BP	DE 38 11 052 C1			8/24/89		Germany			H04R	1/20				
	BQ	WO 91/16966			11/14/91		PCT			B01D	57/02				
	BR	1-280694			11/1989		Japan			417	413.3				
	BS	1,721,311			03/1992		Russia			417	413.2				
	BT	WO 91/16966			11/14/91		PCT			B01D 57					
	BU	WO 93/22058			11/11/93		PCT			B01L7					
<i>BYR</i>	BV	6-50974			02/25/94		Japan			33	543	X			

OTHER DOCUMENTS (including Author, Title, Date, Place of Publication)

<i>BYJ</i>	BW	Andle, J. et al., "Detection of Nucleic Acid Hybridization with an Acoustic Plate Mode Microsensor," <i>IEEE ULTRASONICS SYMPOSIUM</i> , Vol. 1, Honolulu, Hawaii, December 4-7, 1990, pp. 291-294.
	BX	Angell, James B., et al., "Silicon Micromechanical Devices," <i>Scientific American</i> , (April 1983) Vol. 248, No. 4, pp. 44-55
<i>BYJ</i>	BY	Backman, Keith, "Ligase Chain Reaction: Diagnostic Technology for the 1990s and Beyond," <i>Clinical Chemistry</i> , (1992) Vol. 38, No. 3, pp. 457-458.

EXAMINER *B.L. Larson* DATE CONSIDERED *1-9-99*

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70608 U.S. PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use several sheets if necessary) <u>07/24/97</u> (37 CFR 1.52(b))				APPLICANT: M. Allen Northrup et al.	
				FILING DATE: Herewith	GROUP <u>1634</u>

OTHER DOCUMENTS (including Author, Title, Date, Place of Publication)

<u>B7f</u>	B2	Erlich, Henry A., ed., "PCR Technology, Principles and Applications for DNA Amplification," <i>PCR Technology</i> M Stockton Press, (1989) pp. 32-38.			
	CA	Esashi, Masayoshi, et al., "Integrated Flow Control Systems Fabricated on a Silicon Wafer," <i>Proceedings, Electrochemical Society Conference. III</i> (18-23 Oct. 1987) Electrochemical Society, Pennington, N.J. pp. 31-38B.			
	CB	Fromberz, Peter, et al., "Core-coat conductor of lipid bilayer and micromachined silicon," <i>Biochimica et Biophysica Acta</i> . (1991) Vol. 1062, pp. 103-107.			
	CD	Gibbs, Richard A., "DNA Amplification by the Polymerase Chain Reaction," <i>Analytical Chemistry</i> , (July 1, 1990) Vol. 62, No. 13, pp. 1202-1214.			
	CE	Heller, M. J., et al., "An Efficient Method for Extraction of DNA from Formalin-Fixed, Paraffin-Embedded Tissue by Sonication," <i>BioTechniques</i> , (1991) Research Report, Vol. 11, No. 3, pp. 372-374 and 476-477.			
	CF	Higuchi, Russel, et al., "Simultaneous Amplification and Detection of Specific DNA Sequences," <i>Biotechnology</i> , (April 1992), Vol. 10, pp. 413-417.			
	CG	Hoopman, Timothy L., "Microchanneled Structures," <i>Microstructures. Sensors and Actuators</i> , (1990) Cho, et al. Eds. The American Society of Mechanical Engineers (4 pages)			
	CH	Howe, Roger T., et al., "Resonant-Microbridge Vapor Sensor," <i>IEEE Transactions on Electron Devices</i> , (April 1986) Vol. ED-33, No. 4, pp. 499-506			
	CI	Howe, R.T., et al., "Silicon Micromechanics: sensors and actuators on a chip," <i>IEEE Spectrum</i> , July 1990, pp. 29-35.			
	CJ	Kawasaki, Ernest S., "Sample Preparation from Blood, Cells, and Other Fluids," <i>PCR Protocols. A Guide to Methods and Applications</i> , (1990) Innis, Michael A., et al., ed., Academic Press, Inc., Chapter 18, pgs. 146-149			
	CK	Kricka, et al., "Liquid Transport in Micron and Submicron Channels," <i>SPIE</i> , 1167:159-168 (1989).			
	CL	Mandenijs, Carl Fredrik, et al., "The Interaction of Proteins and Cells with Affinity Ligands Covalently Coupled to Silicon Surfaces as Monitored by Ellipsometry," <i>Analytical Biochemistry</i> , (1984) Vol. 137, pp. 106-114.			
	CM	Manz, A., et al., "Micromachining of monocrystalline silicon and glass for chemical analysis systems," <i>Trends in Analytical Chemistry</i> , (1991) Vol. 10, No. 5, pp. 144-149.			
	CN	Masuda, Senichi, et al., "Novel Method of Cell Fusion in Field Constriction Area in Fluid Integrated Circuit," <i>Proceedings IEEE/IAS Meeting</i> , (1987) pp. 1549-1553.			
	CO	Oste, Christian, "Polymerase Chain Reaction," <i>BioTechniques</i> , (1988) Vol. 6, pp. 162-167			
	CP	Parce, J. Wallace, et al., "Detection of Cell-Affecting Agents with a Silicon Biosensor," <i>Science</i> , (Oct. 13, 1989) Vol. 24, pp. 243-247			
<u>B7f</u>	CQ	Pfahler, P., et al., "Liquid Transport in Micron and Submicron Channels," <i>Sensors & Actuators</i> , (1990) pp. 431-434.			
	CR				

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OTHER DOCUMENTS (including Author, Title, Date, Place of Publication)

<i>B.L.</i>	DA	Sato, Kazuo, et al. "Individual and Mass Operation of Biological Cells using Micromechanical Silicon Devices," <i>Sensors and Actuators</i> , (1990) A21-A23:948-953
	DB	Senturia, Stephen D., et al., Section 2.5: Microprocessor Packaging, (Paper presented at the 14th Automotive Materials Conference, Ann Arbor, MI, U.S.A. November 19, 1986, pp. 185-191.) Reprinted with permission from <i>Sensors and Actuators</i> , Vol. 15, pp. 221-234, November 1988.
	DC	Shoji, Shuichi, et al. "Prototype Miniature Blood Gas Analyser Fabricated on a Silicon Wafer," <i>Sensors and Actuators</i> (1988), Vol. 15 pp. 101-107
	DD	Sundaram, Mani, et al., "New Quantum Structures," <i>Science</i> , November 29, 1991, Vol. 254, pp. 1326-1335.
	DE	Van Lintel, H.T.G., et al., "A Piezoelectric Micropump Based on Micromachining of Silicon," <i>Sensors and Actuators</i> , 15 (1988) pp. 153-167
	DF	Vossen, John L., et al. "Thin Film Processes," Copyright 1978 Academic Press, Inc., Chapter I-1, pg. 5 and Chapter III-2, pg. 309.
	DG	Washizu, Masao, et al., "Handling of Biological Cells Using Fluid Integrated Circuit," <i>Proceedings IEE/IAS Meeting</i> , (1988) pp. 1735-1740.
	DH	Wenzel, Stuart T., et al., "A Multisensor Employing an Ultrasonic Lamb-Wave Oscillator," <i>IEEE Transactions on Electron Devices</i> , June 1988, Vol. 35, No. 6, pp. 735-743.
	DI	White, R., U.S. Patent Application No. 07/162,193, filed February 29, 1988, now abandoned.
	DJ	Whitesides, George M., "Molecular Self-Assembly and Nanochemistry: A Chemical Strategy for the Synthesis of Nanostructures," <i>Science</i> , Vol. 254, pp. 1312-1319.
	DK	Wise, K.D., et al., "Microfabrication Techniques for Integrated Sensors and Microsystems," <i>Science</i> , (Nov. 29, 1991) Vol. 254, pp. 1335-1342.
<i>B.L.</i>	DL	Wittwer, Carl T., et al., "Minimizing the Time Required for DNA Amplification by Efficient Heat Transfer to Small Samples," <i>Analytical Biochemistry</i> , (1990) Vol. 186, pp. 328-331.
	DM	
	DN	
	DO	
	DP	
	DQ	
	DR	

EXAMINER *G.L. Lissner*DATE CONSIDERED *1-9-99*

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07043/015007SERIAL NO.
08/900,735INFORMATION DISCLOSURE
STATEMENT BY APPLICANT
(Use several sheets if necessary)APPLICANT:
M. ALLEN NORTHRUP, ET AL.

(37 CFR 1.98(b))

FILING DATE
07/24/97GROUP
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U.S. DEPARTMENT OF COMMERCE

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER							ISSUE DATE	PATENTEE		CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
BYA	AA	5	0	0	6	7	4	9	04/09/91	WHITE	310	323	10/03/89
BZL	AB	5	1	2	9	2	6	1	07/14/92	RILEY	73	313	02/20/91
BZL	AC	5	1	2	9	2	6	2	07/14/92	WHITE ET AL.	73	599	01/18/90
	AD												
	AE												
	AF												
	AG												
	AH												
	AI												
	AJ												
	AK												

FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION

		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
BYA	AL	5-317030	12/03/93	JAPAN	C12M	1/00	X	
BYA	AM	7-506258	07/13/95	PCT	C12M	1/00		X
BYA	AN	WO 94/05414	03/17/94	PCT	B01F	11/02	X	
	AO							
	AP							

OTHER DOCUMENTS (including Author, Title, Date, Place of Publication)

BYA	AQ	Muller et al., Microsensors, IEEE Press, 1990 [Book 472 pgs.]
	AR	
	AS	

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